



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 5 :

G07G 1/00, G06F 15/30

A1

(11) International Publication Number:

WO 93/08546

(43) International Publication Date:

29 April 1993 (29.04.93)

(21) International Application Number: PCT/IT91/00103

(22) International Filing Date: 26 November 1991 (26.11.91)

(30) Priority data:

MI91A/002805 23 October 1991 (23.10.91) IT

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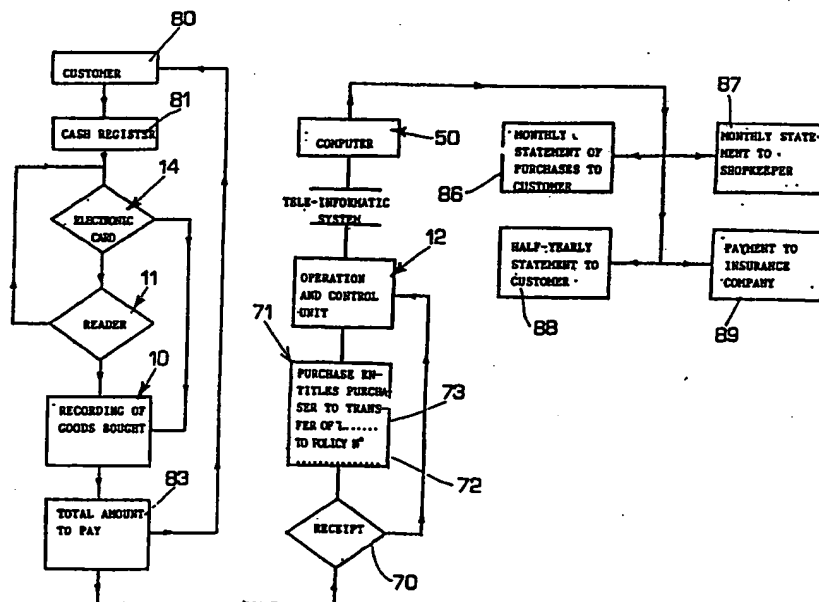
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(81) Designated States: European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE).

Published

With international search report.

(54) Title: ELECTRONIC SYSTEM FOR AUTOMATICALLY TRANSFERRING A PERCENTAGE OF A SUM, SPENT ON PURCHASES IN SHOPS INVOLVED IN THE SCHEME, TO AN INSURANCE POLICY IN THE PURCHASER'S NAME



(57) Abstract

Electronic system for automatically transferring a percentage on purchases, made in shops taking part in the scheme to an insurance policy taken out in the name of the purchaser, comprising an electronic complex (9) consisting of an electronic cash register (10), of an electronic card reader-writer (11) and of an electronic control unit (12) to be installed in the shops concerned, a computer (50) to be situated at the office of an organization that runs the system, connected by a tele-informatic system with the above electronic complex (9), and a special kind of electronic card (14), suitably programmed that is issued to the customers of said shops.

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ELECTRONIC SYSTEM FOR AUTOMATICALLY TRANSFERRING A  
PERCENTAGE OF A SUM, SPENT ON PURCHASES IN SHOPS INVOLVED IN THE SCHEME, TO AN INSURANCE POLICY IN THE PURCHASER'S NAME

5 The invention concerns tele-informatic equipment specially connected for automatic operation of insurance methods. In all shops today there are cash registers for calculating the total sum a purchaser spends and issuing printed slips for fiscal use.

10 Payment may be made by means of an electronic card and for this purpose the cash registers are connected to a reader device.

Also well known are the various insurance systems whereby the insured person pays a premium and receives compensation for harm suffered due to an accident or to some  
15 event, or receives payment of a lump sum or of an income following injuries that affect his life.

Many people who might be willing to sign an insurance contract fail to do it for lack of time or opportunity, or  
20 because they are unaware of the relative benefits or do not know how to go about it, or because they are under no pressure to do so, thus depriving themselves of all the advantages that an insurance policy offers.

Insurance companies also suffer because they conclude  
25 fewer contracts.

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Another reason that discourages people from signing such contracts is that they are reluctant to undertake periodical disbursement of sums which they are obliged to continue paying for years unless they want to forfeit all the rights acquired up to that time.

Pressure to save by the well-known methods of advertising and promotion obviously have certain insurmountable limits. Purpose of the above invention is to provide a means for creating insurance coverage to the advantage of both the policy holders and the insurance companies.

Subject of the invention is an electronic system for automatically transferring a percentage of purchases made in shops partaking in the scheme, to an insurance policy held by the purchaser.

The system comprises the following:

- a set of equipment consisting of an electronic cash register, a reader-writer of electronic cards and an electronic operating and control unit situated in the shop;
- a computer in the office of an organization running the tele-informatic system connected to the above equipment;
- a special kind of electronic card.

The card is issued by the above organization to each customer of the shops concerned who has applied for one, and includes a memory to contain all the customer's personal and statistical details as well as the number of the insurance policy drawn up in said customer's name.

This policy is taken out with an insurance company through the organization that operates the system.

After insertion of a customer's electronic card in the reader-writer device and when the amount of the purchases the customer has made has been recorded, the cash register

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calculates the sum corresponding to the percentage of said amount to be transferred to the insurance policy in said customer's name. The whole is then stored in a memory and a fiscal receipt is issued showing the list of purchases,  
5 the amount of the above percentage and the number of the customer's insurance policy.

By means of a system of tele-informatics, the electronic control unit simultaneously sends all data concerning the above operation, and especially the sum to be transferred  
10 to the policy of the customer who has made the purchases, to the computer connected to said control unit and situated in the office of the organization that runs the service. The cash register comprises logic circuits, memory units, a printer head, a keyboard, a display and an interface unit  
15 for connection to the electronic card reader-writer device, to the scanner unit of purchased items and to the electronic control unit.

The electronic card reader-writer device comprises logic control units, memory units, the reader-writer device itself and an interface for connection to the cash register's  
20 interface.

The electronic control unit comprises a switching section for the interfaces of two sets of logic control units connected to memory units for connection to the cash register  
25 and for the computer installed at the organization that runs the service.

The electronic card may be either of the type with built-in chip or else magnetic.

The invention has obvious advantages.

30 Payment of the premium is automatic and is related to the frequent and necessary actions commonly made such as purchasing goods.

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The sum to disburse is no longer fixed but is proportional to that spent on purchases and payment is not obligatory. The whole is realized by simple means using apparatus of a well-known kind and electronic circuits associated in an original manner, and original electronic equipment of great simplicity and effectiveness.

Characteristics and purposes of the invention will be made still clearer by the following example of its execution illustrated by diagrammatic figures.

#### 10 Example of execution

Fig.1 Diagram of the electronic system subject of the invention.

Fig.2 Layout of the electronic complex installed in shops including a cash register.

15 Figs. 3A and 3B Front and back views of the electronic card used in the system.

Fig.4 Facsimile of the receipt issued by the cash register

Fig.5 Diagram of how the invented electronic system works.

Figs. 6A, 6B, 6C Logic control units

20 Figs. 7A 7B 7C 7D Memory units RAM (A)

Figs. 8A 8B 8C 8D " " "

Figs. 9A 9B Electronic card reader-writer device.

Figs. 10A 10B 10C 10D Exchange diagram of the operating and control unit.

25 In a shop that has agreed to work in conjunction with an organization operating this service, an electronic complex 9 is installed, consisting of an electronic cash register 10, a reader-writer of electronic cards 11, a purchase selection unit 13 and a control unit 12.

30 The electronic circuit of the cash register 10 comprises two logic control units 20 and 21.

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The first of these is connected to the memory unit 22. The second is connected to the printer head 23, to the keyboard 24, to the display 25 and to the interface 26 for connection to the rest of the units.

- 5 The electronic card reader-writer 11 comprises the interface 30 connected to the logic control unit 31, to the memory logic unit 32 and to the electronic card reader-writer head 33.

The operation and control unit 12 comprises the switch  
10 section AB 40 connected to interfaces A 41 and B 42. The interface A 41 is connected to the logic control unit 43, in turn connected to memory units B 44 and 45. The interface B 42 is connected to the logic control unit B46, in turn connected to memory units B 47 and 48.

- 15 The electronic complex 9 is connected by the switch section 40 to the computer 50 situated at the offices of the organization that runs the service, in turn served by the printer 51 and by the monitor 52.

The electronic card 14 is of the type with built-in chip;  
20 it contains in its memory the customer's personal and statistical data and the indications as shown in Figs. 3A and 3B.

On the front side may be seen the name 60 of the organization that operates the system, the name 61 of the elec-  
25 tronic card, its progressive number 62, the progressive number 63 of the insurance policy made out to the owner of the electronic card, and said owner's name 64.

On the back may be seen the name 65 of the shop taking part in the scheme, the brand name 66 of the card, the  
30 space 67 for the holder's signature and the magnetic strip 68.

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The organization that operates the services issues said electronic card to the customers of a supermarket or any kind of-shop taking part in the scheme and at the same time draws up a special insurance policy in the name of each one.

The system works as shown by the diagram in Fig. 5.

The customer 80 who has chosen the products to be bought in one of the above shops, goes to the cash desk 81 and pays for the goods with the electronic card 14.

10 The cashier puts said card in the reader device 11 and after its acceptance is notified, taps out the prices of the goods.

The cash register 10 records the purchases and calculates the total 83, issues the receipt 70 for the customer showing the percentage 73 of the total amount of purchases to be transferred to said customer's insurance policy.

15 All this is stored in the memory unit 22.

The receipt bears a declaration 71 of this transfer and the number 72 of the policy and percentage amount 73.

20 After the total has been printed, the cash register 10 ceases recording on the inserted electronic card 14 and assumes the position for reading the next of said cards.

The recorded data are transmitted by a tele-informatic process, through the operating and control unit 12 to

25 the computer 50 at the organization running the system.

Each month said organization sends to each customer a statement 86 of what has been bought in the month and recorded with the electronic card and, to the shop where the purchases were made, the statement 87 of what was

30 bought there with said electronic card and the sum to be paid over to the above organization for the customer's insurance policy.



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Every six months said organization will send to each customer a progressive Statement 88 of the sum transferred to the insurance policy of that customer and will pay over to the insurance company the sums 89 received from  
5 the shop.

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CLAIMS

1. Electronic system for automatically transferring a percentage of a sum, spent on purchases in shops taking part in the scheme, to an insurance policy in the purchaser's name

characterized in that it comprises an electronic complex (9), situated in said shops, composed of an electronic cash register (10), of an electronic card reader-writer (11) and of an electronic unit (13) for operation and control, and comprises a computer (50) situated at the office of an organization that runs the system connected by tele-informatics to the above electronic complex (9) and further comprises a special kind of electronic card (14) issued by the above organization to each customer of the shops concerned who has requested it, containing a memory for storing all the customer's personal and statistical data as well as indication (63) of the number of the insurance policy taken out in said client's name by an insurance company, said cash register (10), having inserted a customer's electronic card (14) in the electronic card reader-writer (11) and recorded the amounts of said customer's purchases, then calculating the corresponding percentage on said purchases to be transferred to said customer's insurance policy, storing the whole in its memory and issuing a receipt (70) which, as well as listing the purchases, also indicates the amount (73) of said percentage and the number (72) of said insurance policy, the electronic control unit (12) simultaneously sending, by means of a system of telematics, all data concerning the above operation and especially the amount to be transferred

to the policy of the customer who has made the purchases to the computer (50) situated in the office of the organization running the system, enabling said organization to send periodically a statement to the shopkeeper  
5 showing the purchases made and the amount he has to pay over to the insurance policy, and to send a statement to the customer showing how much was purchased in a certain period and the sums transferred to the insurance company.

2. System as in claim 1,  
10 characterized in that the cash register (10) comprises logic circuits (20) (21), a memory unit (22), a printer head (23), a keyboard (24), a display (25) and an interface electronic card (26) for connection to the electronic card reader-writer (11), to the scanner of purchased  
15 items and to the electronic control unit (12).

3. System as in claim 1,  
characterized in that the electronic card reader-writer (11) comprises logic control units (31), a memory unit (32), the actual reader-writer device (33) and an inter-  
20 face (30) for connection to the interface (26) in the cash register (10).

4. System as in claim 1,  
characterized in that the electronic control unit (12) comprises a switching section (40) for the interfaces  
25 (41) (42) of two sets (43) (46) of logic control units respectively connected to memory units (44-45) (47-48) for linking up with the cash register (10) and with the computer (50) at the organization running the system.

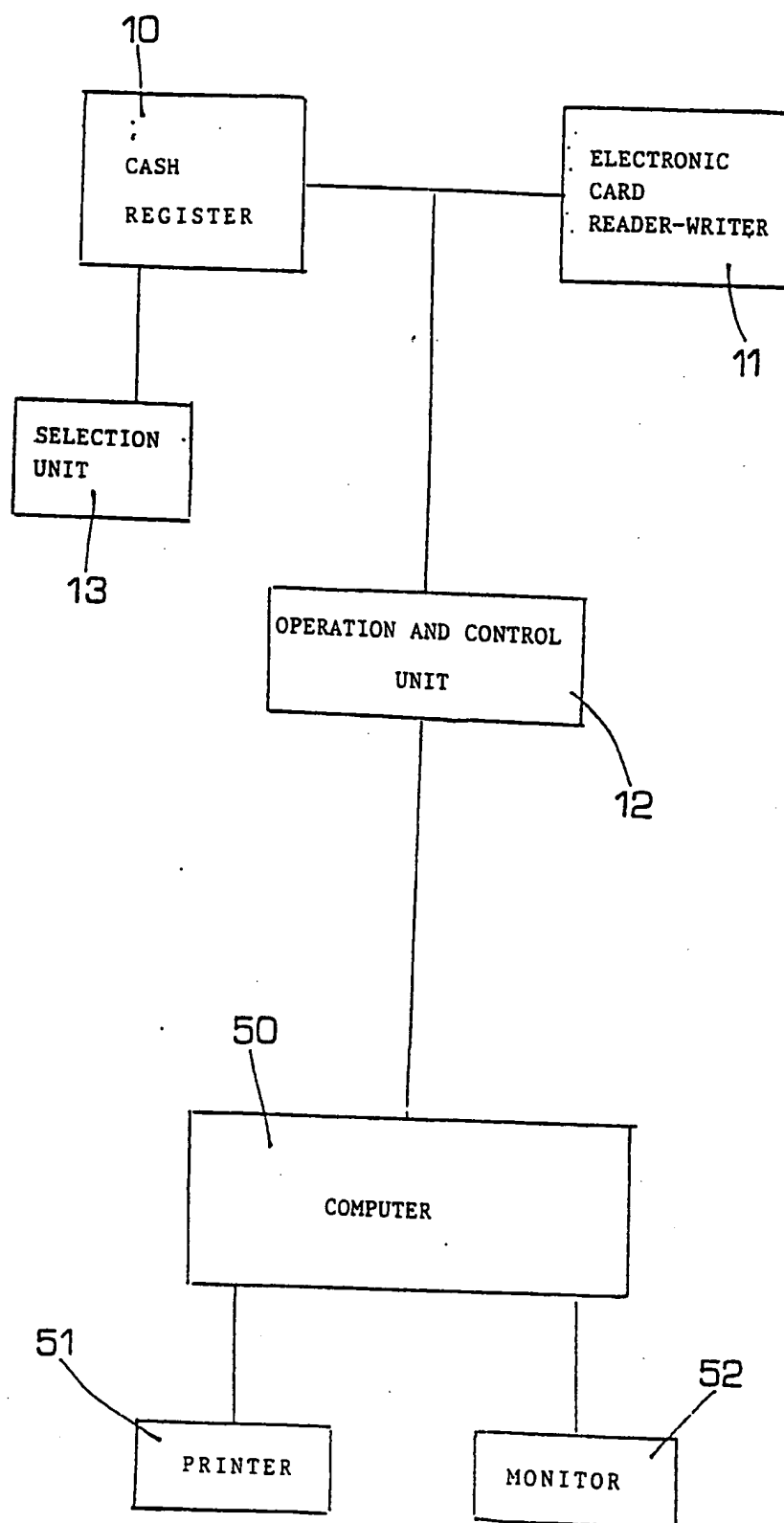
5. System as in claim 1,  
30 characterized in that the electronic card (14) is of the type having a built-in chip.

- 10 -

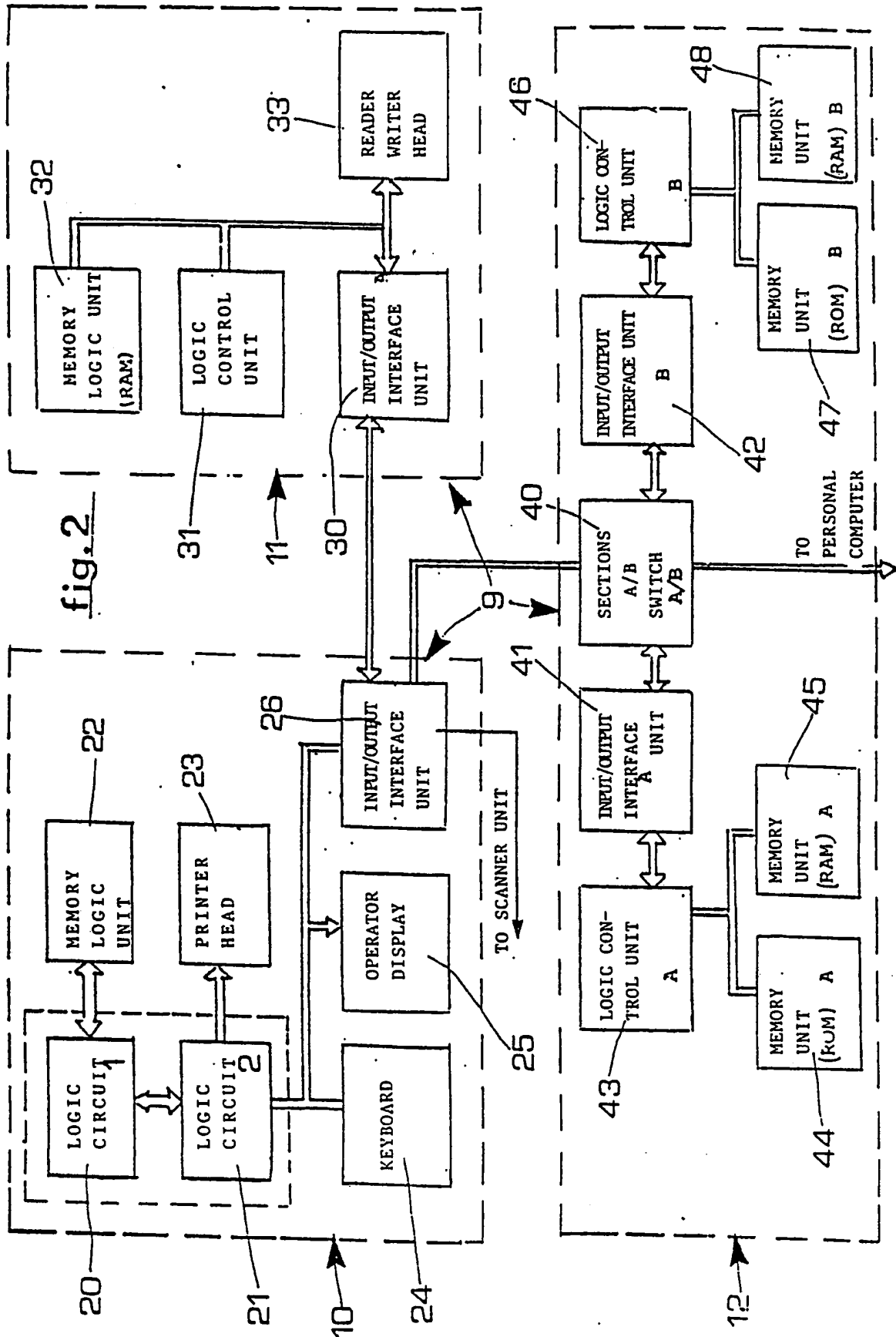
6. System as in claim 1,  
characterized in that the electronic card (14) is of the  
magnetic type.

5

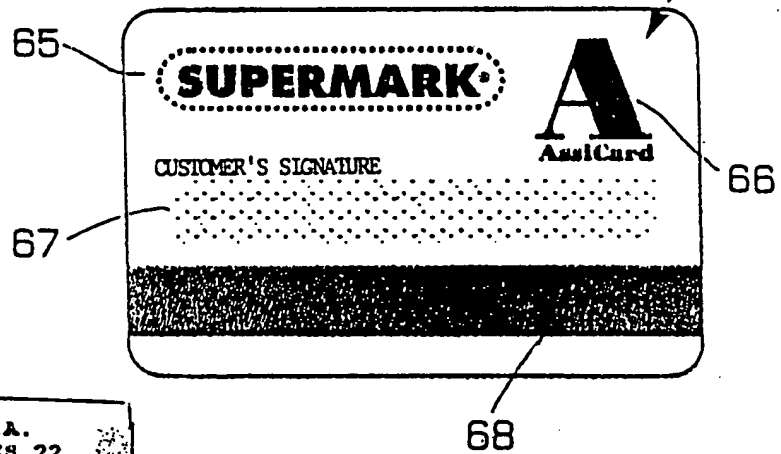
1/22

fig. 1

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3/22

fig. 3Afig. 3B

SUPERMARK S.P.A.  
C.SO BUENOS AIRES 22  
20124 MILANO  
TEL. 02-4456745  
P.IVA 000677864345

N.0089      09.11.92

436754 Bread	4.000
654378 Veg.	5.090
542311 Pasta	5.800
436704 Milk	1.100
691278 Water	.960
982311 Ham/bacon	9.800

Cash desk No.6  
Time 5.45 pm

Total      26,770

These purchases entitle the purchaser to transfer of Lire 2,677 to ins.policy

No. 09887539/456/21

MR AS      99067532

THANK YOU

fig. 4

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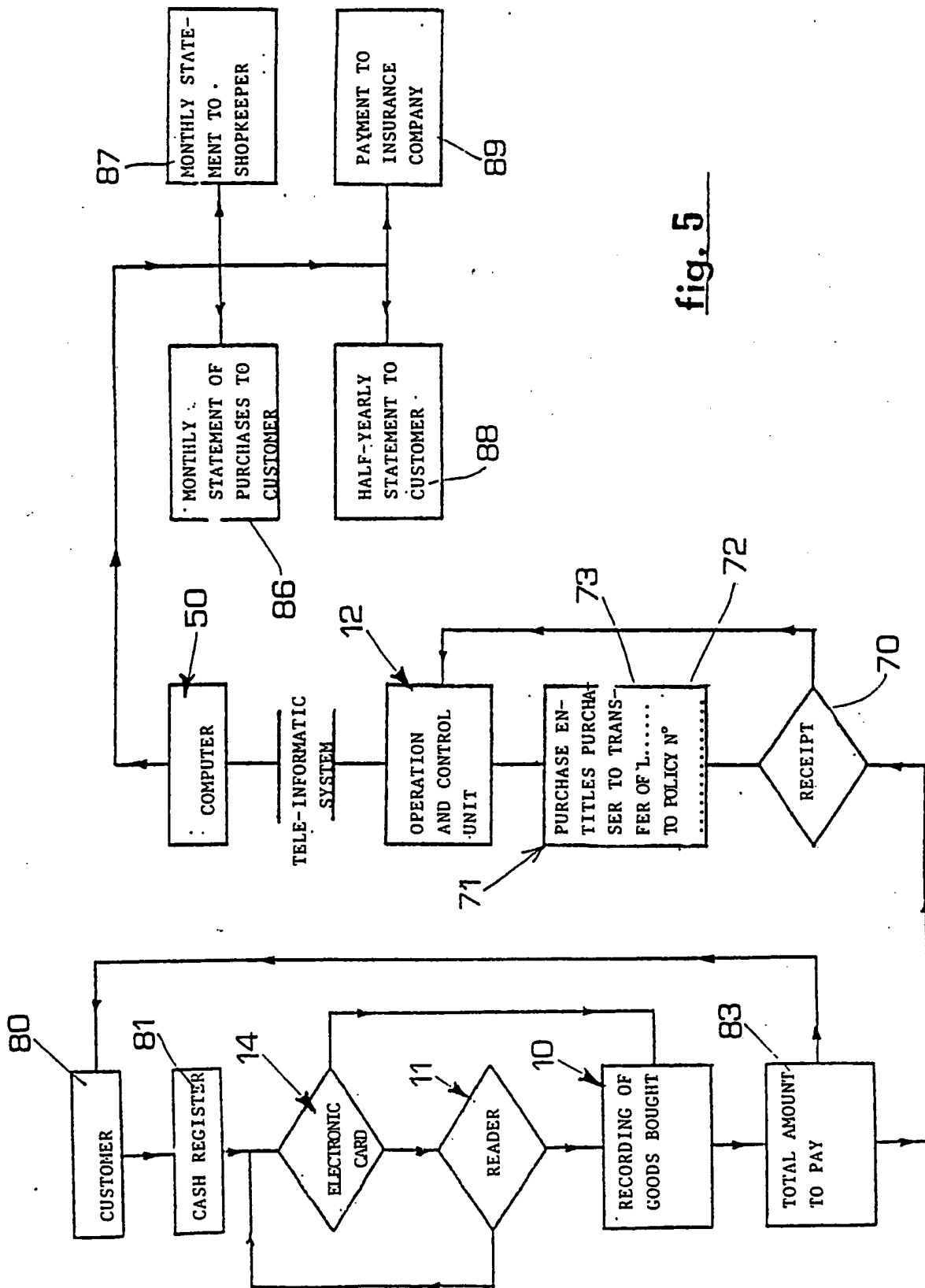


fig. 5



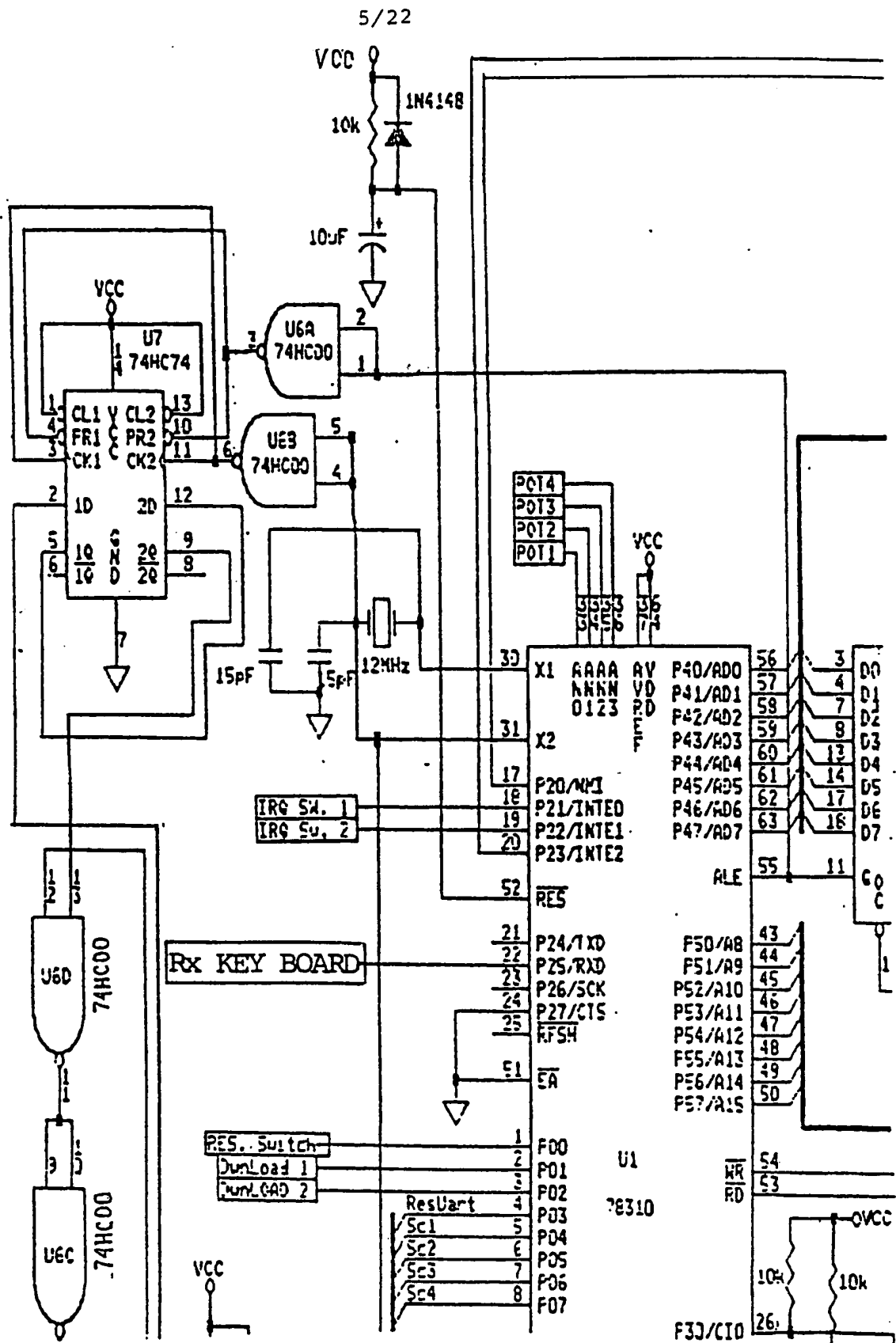
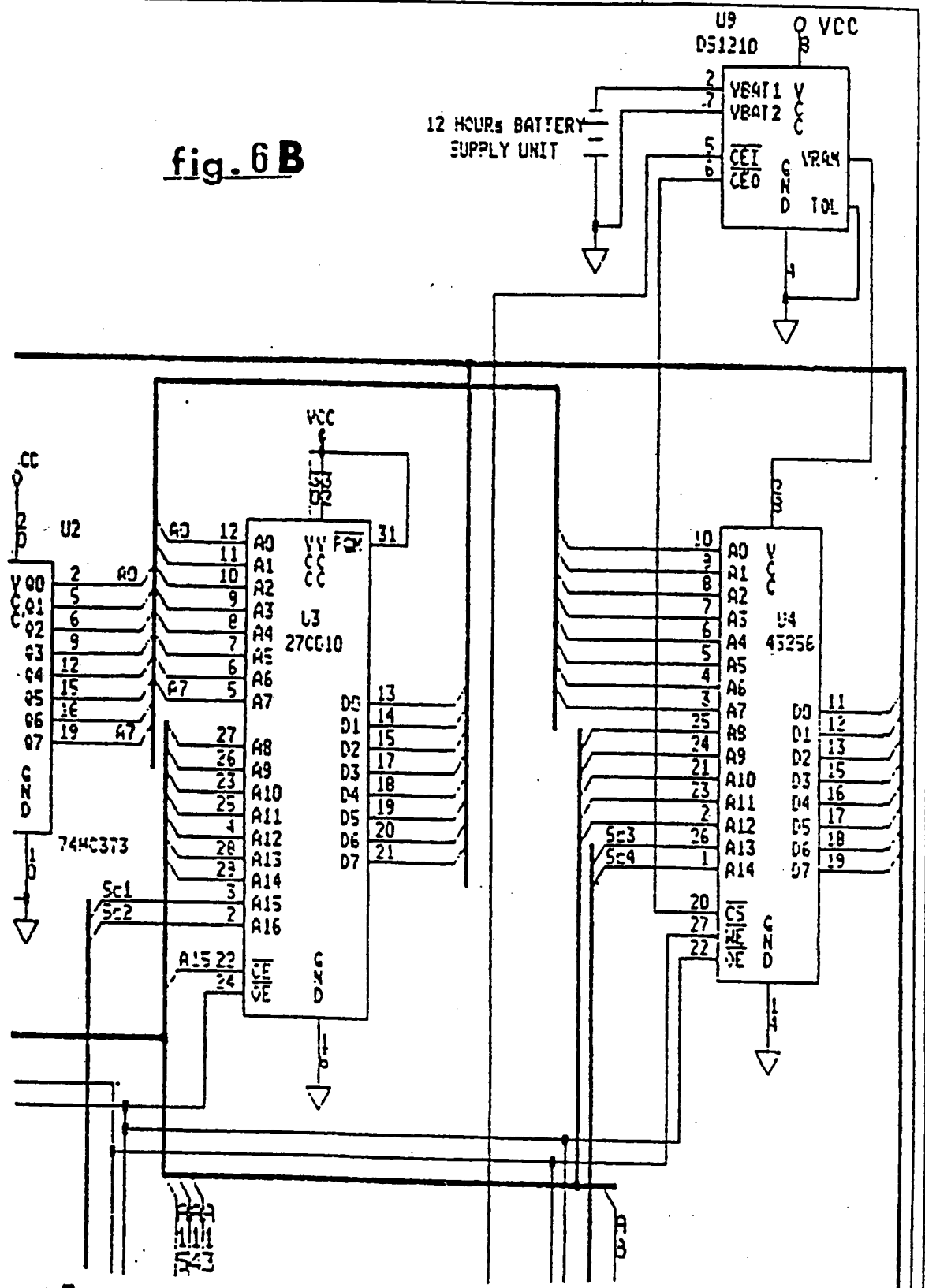


fig. 6A

B  
C

6/22

fig. 6 B





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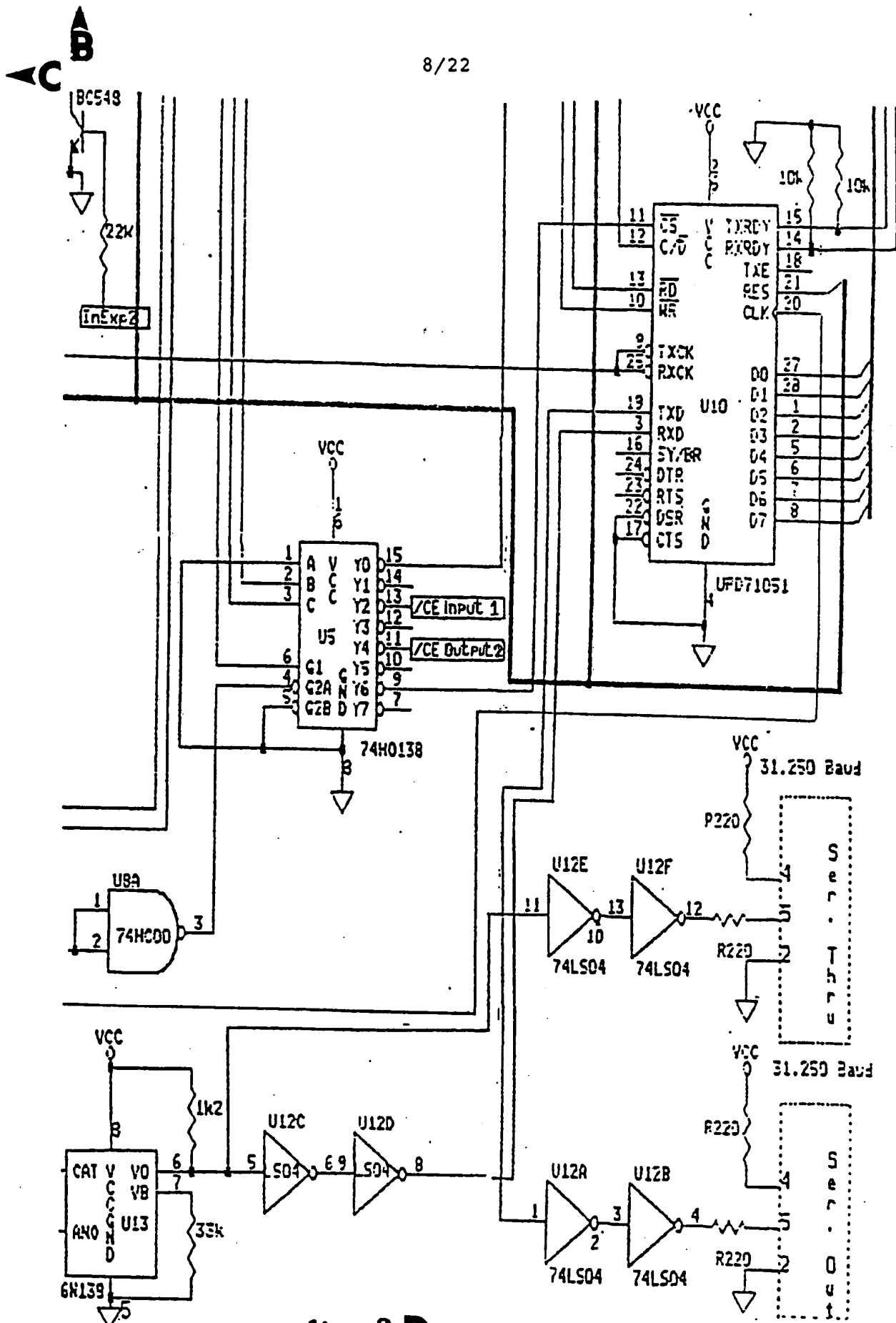


fig. 6 D

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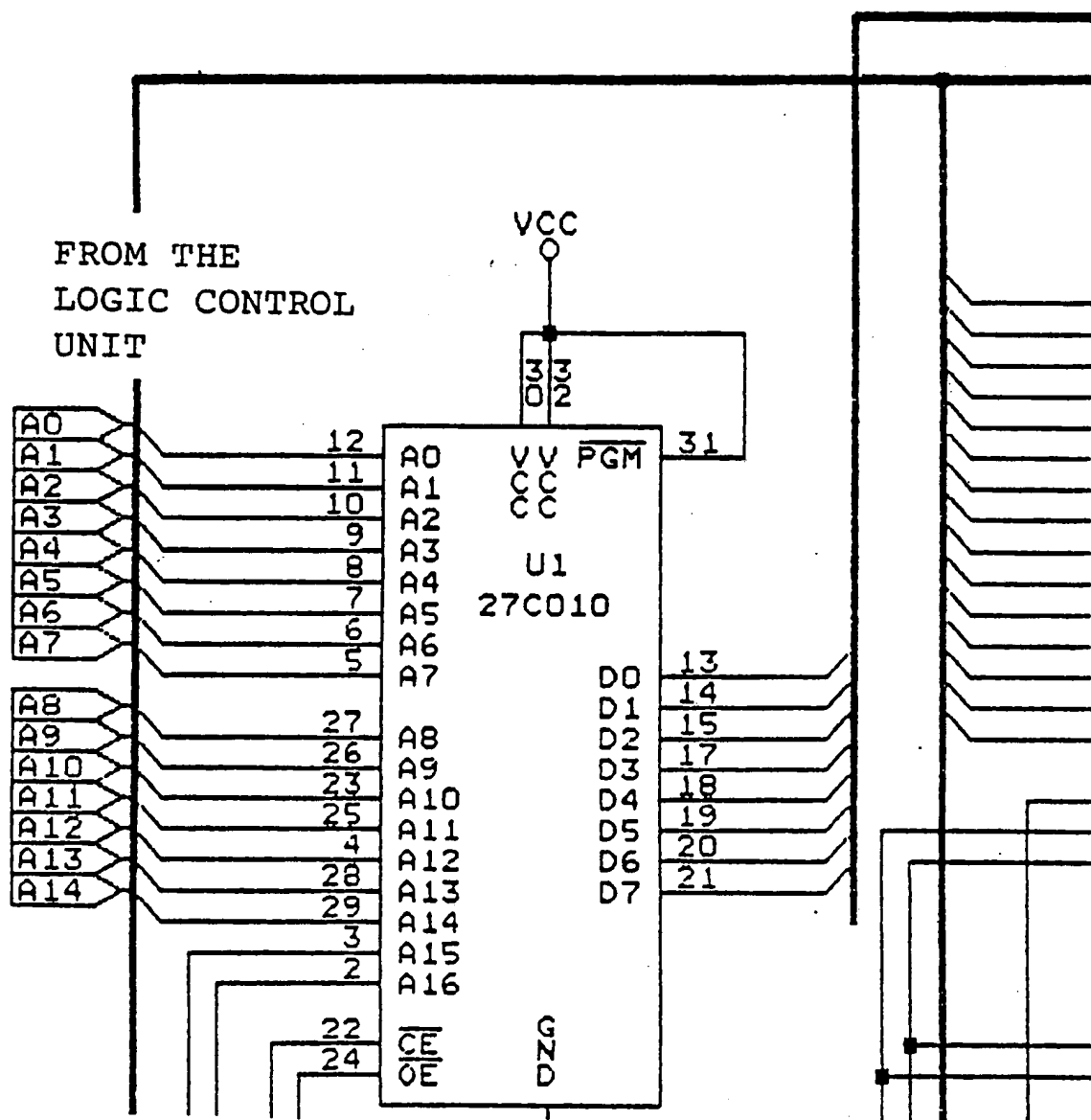


fig. 7 A

C B

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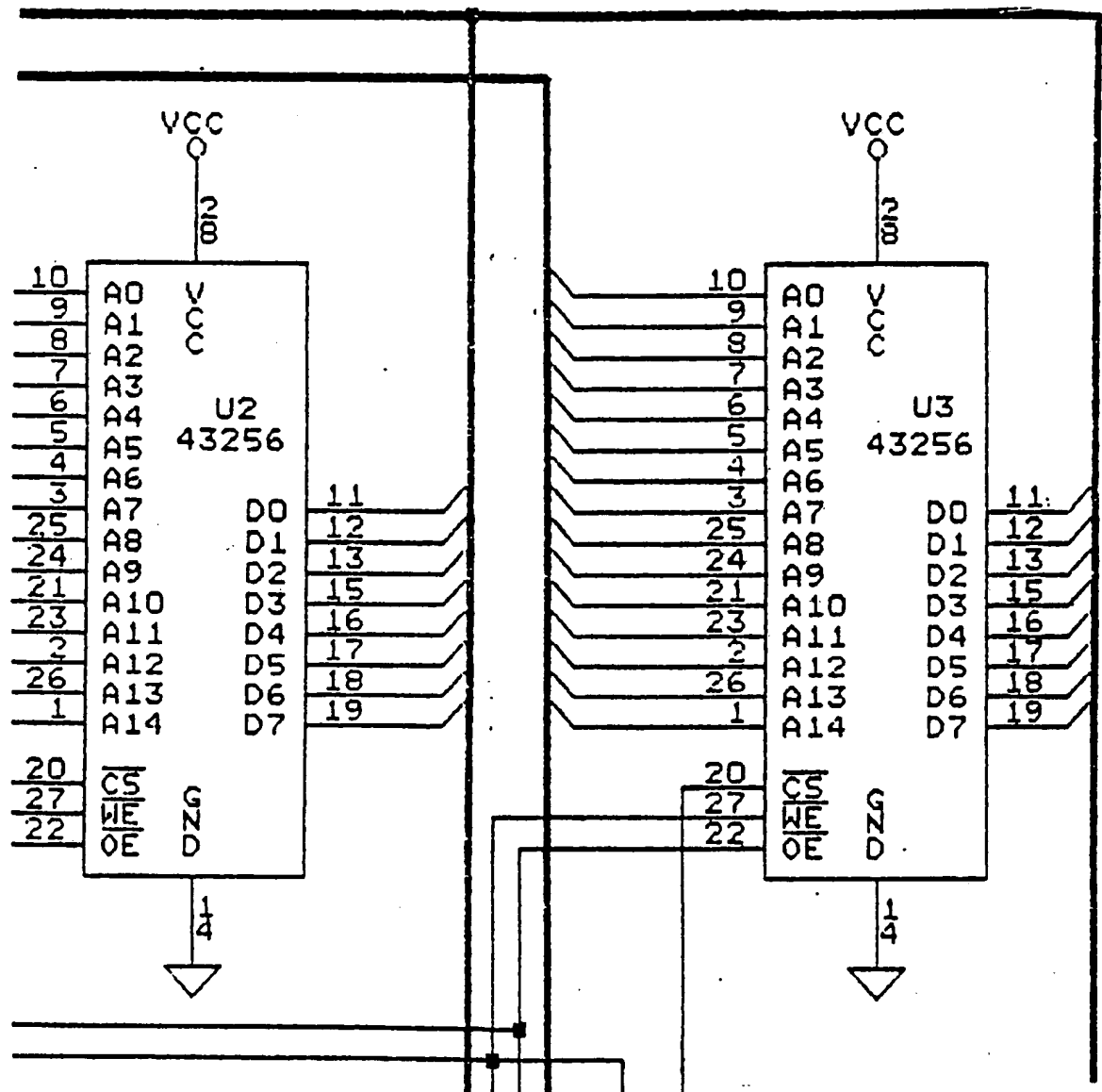


fig. 7 B

◀A  
D▼

11/22

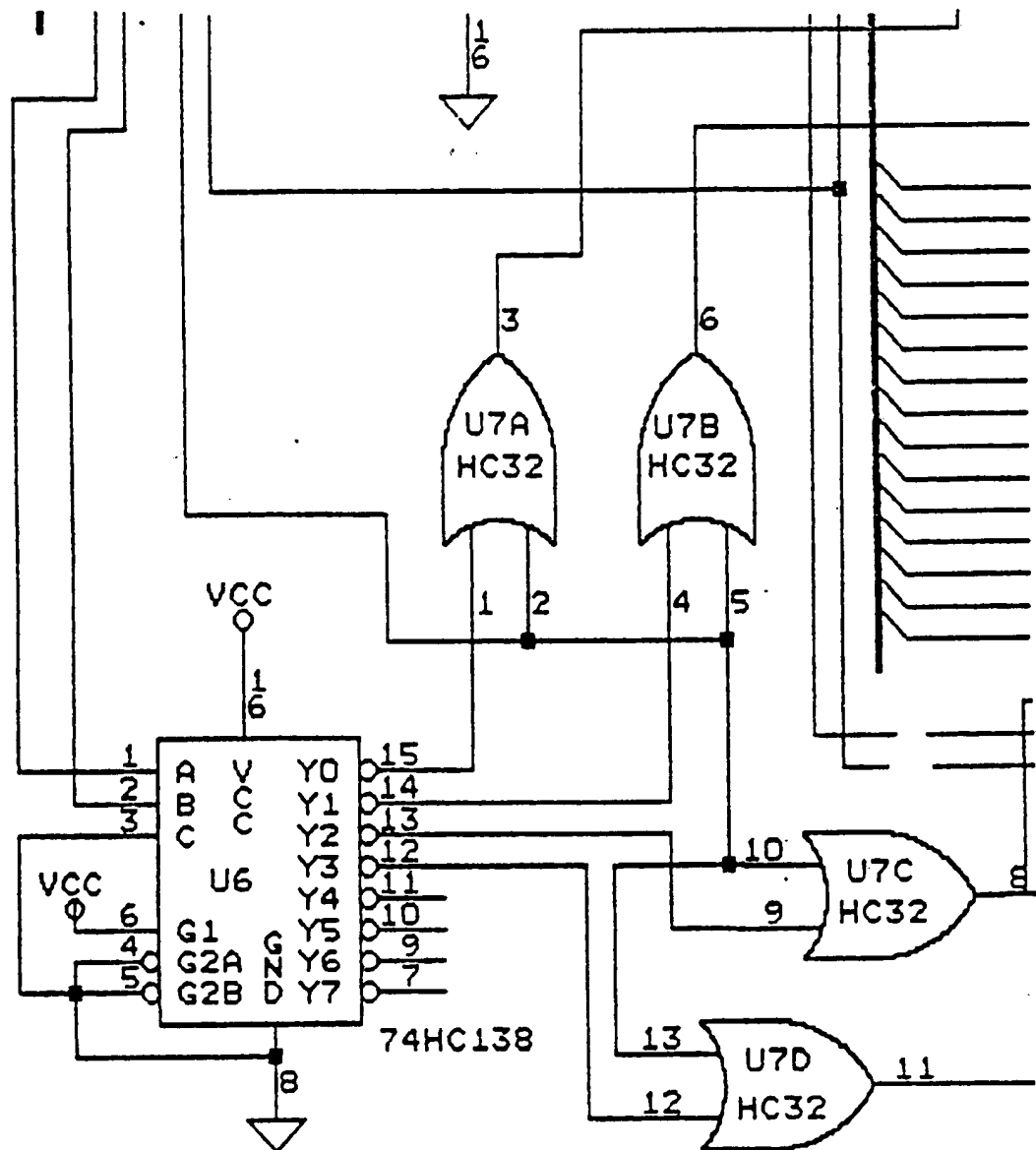
A  
D

fig. 7

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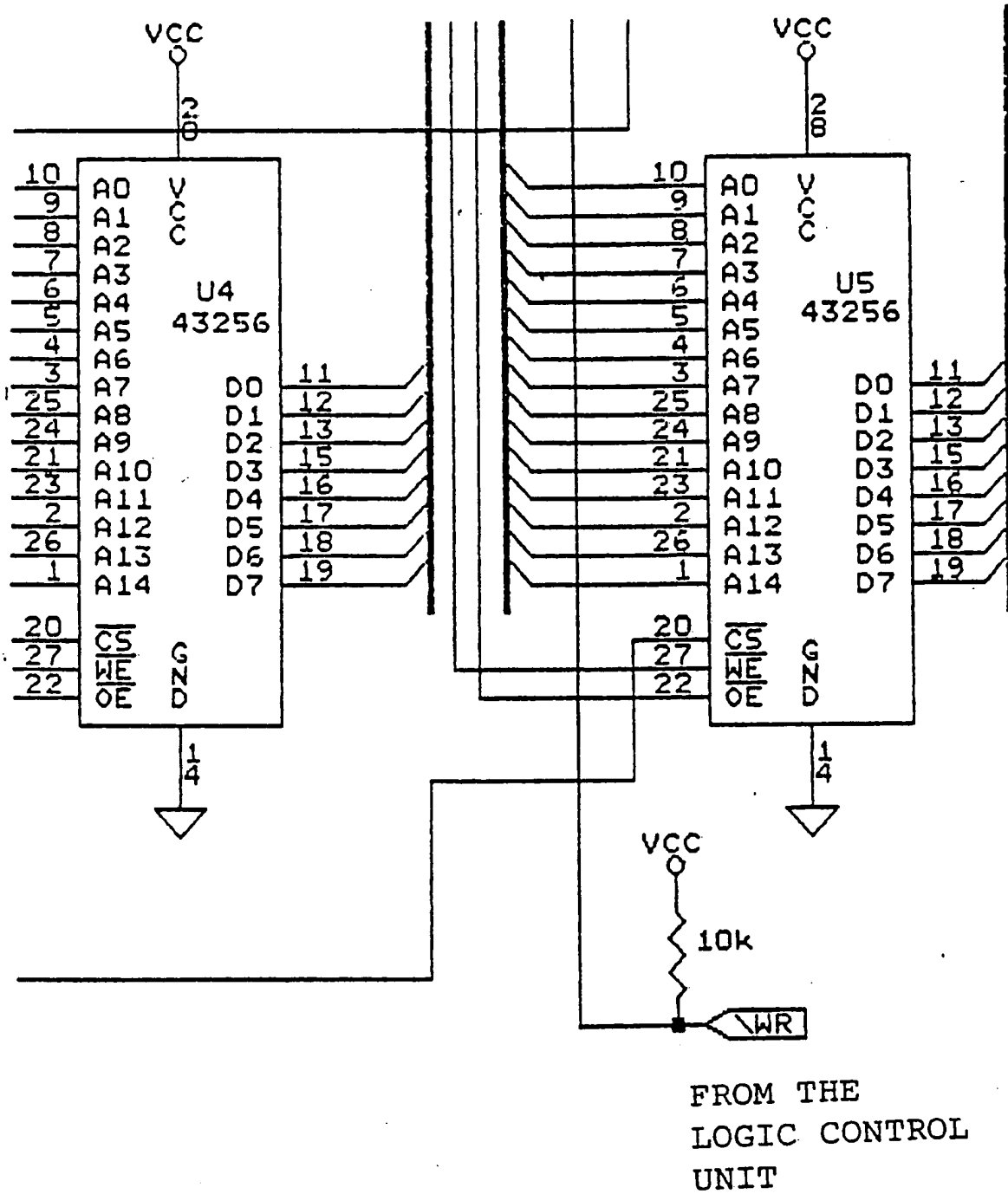
A  
B  
C

fig. 7 D



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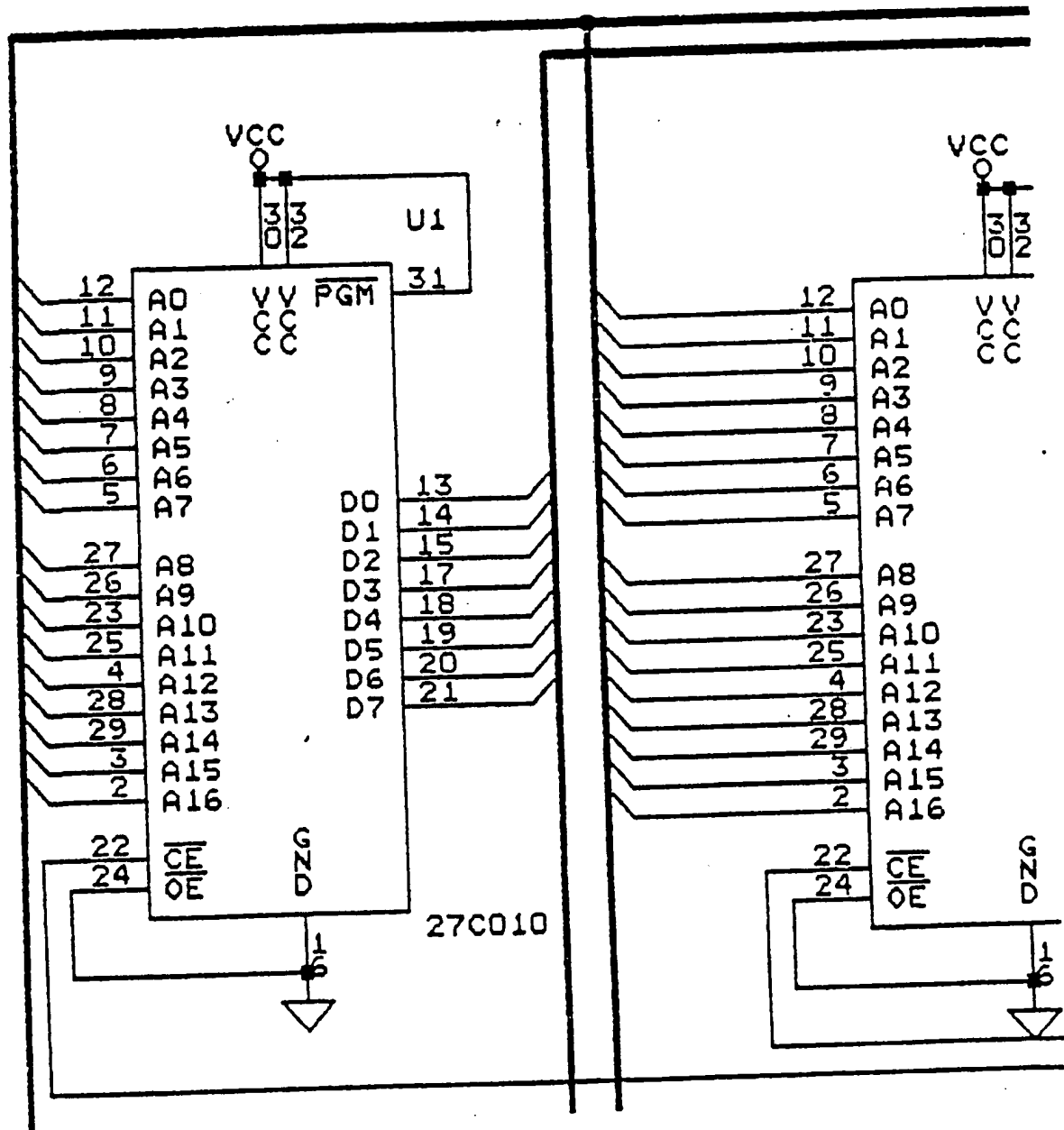
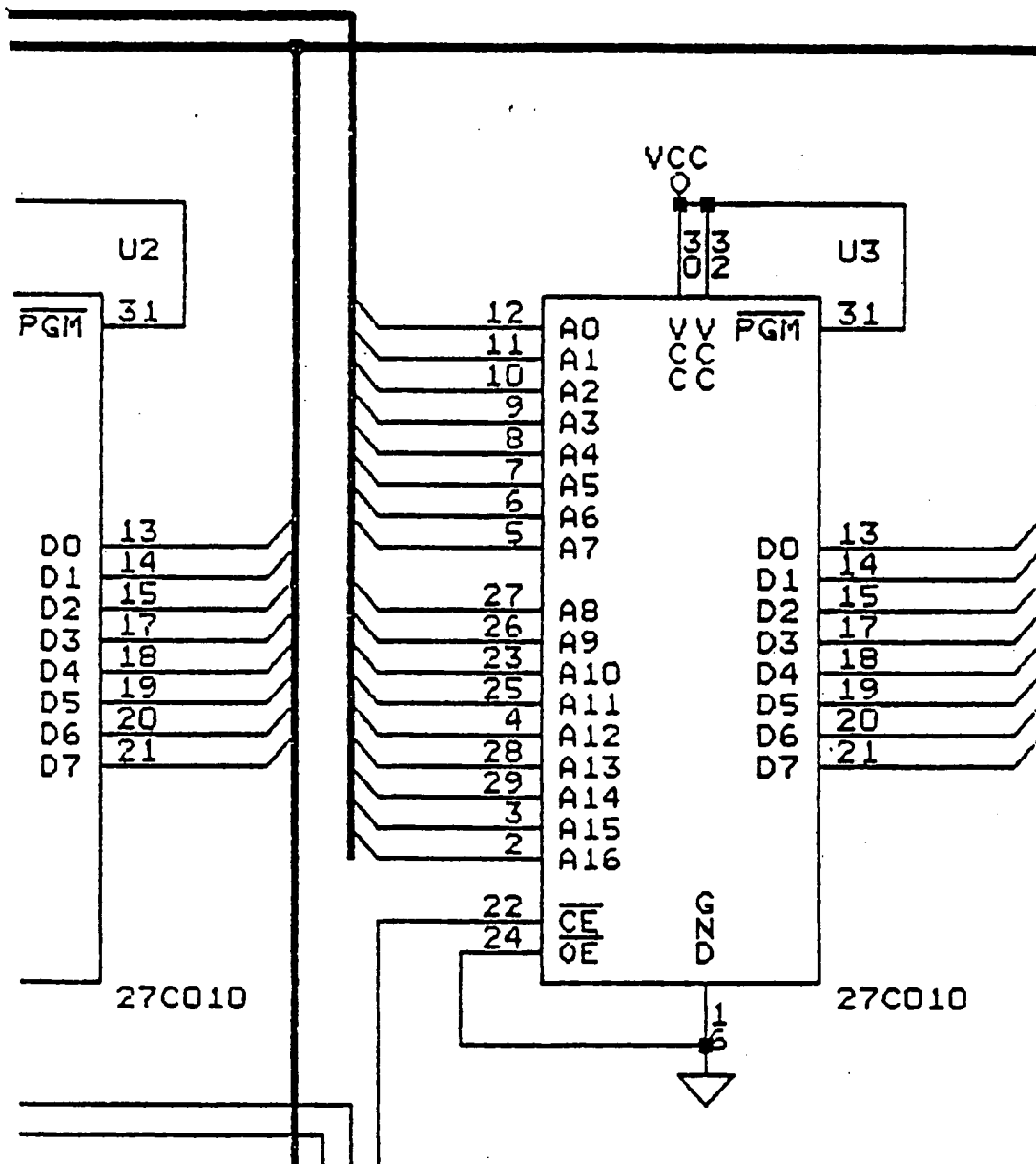


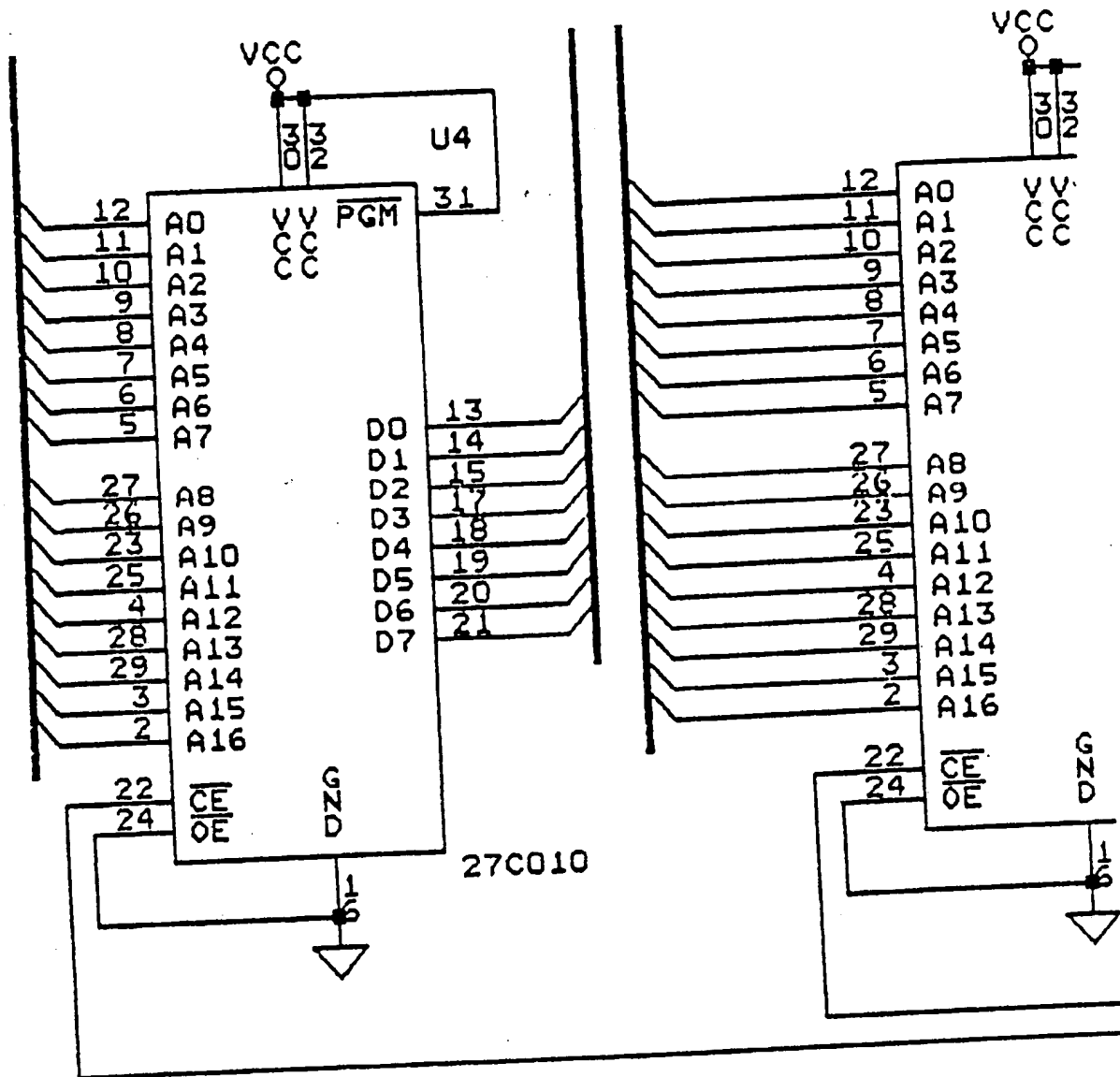
fig. 8A

B  
C



←A  
B  
↓

fig. 8B

**A**  
**D****fig.8C**

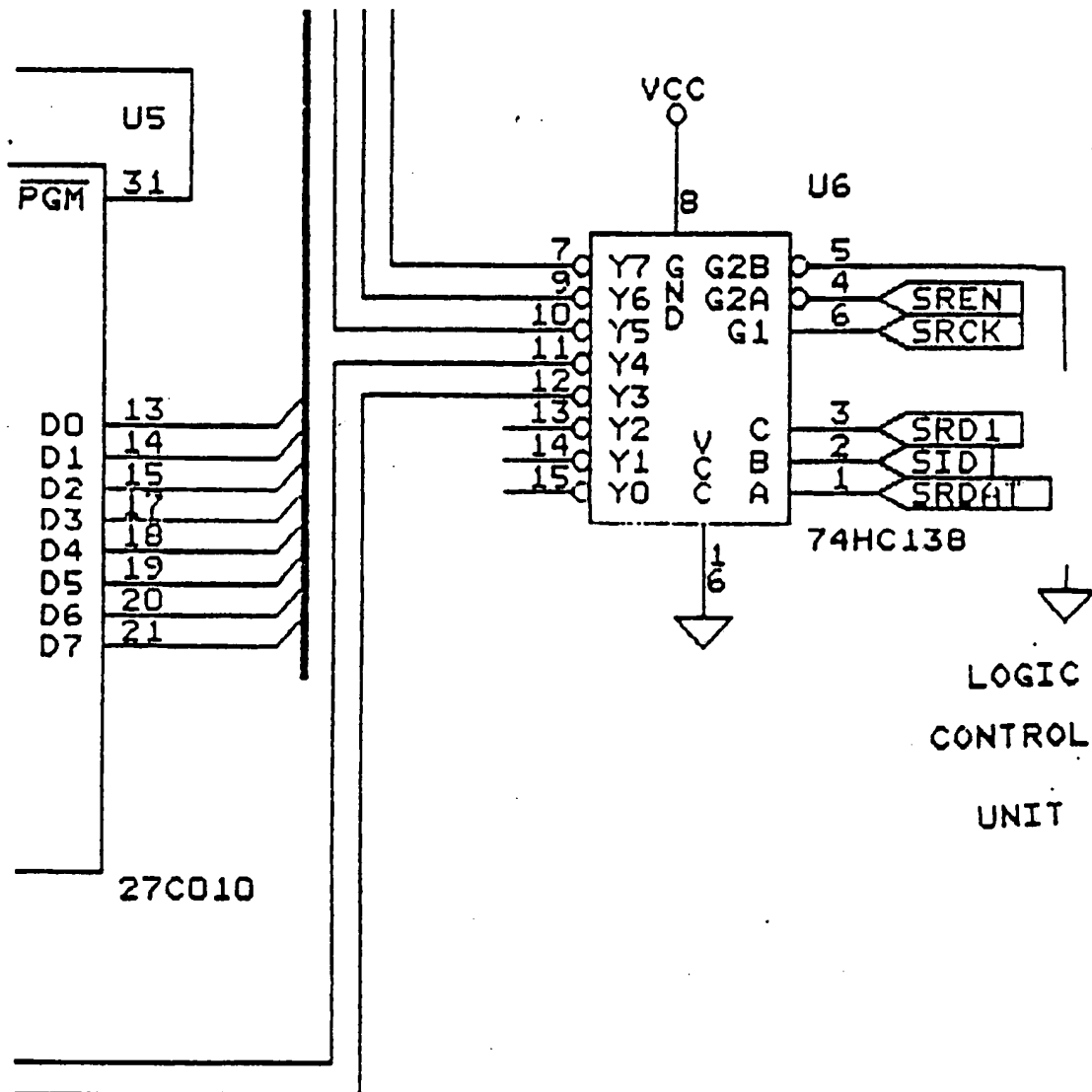
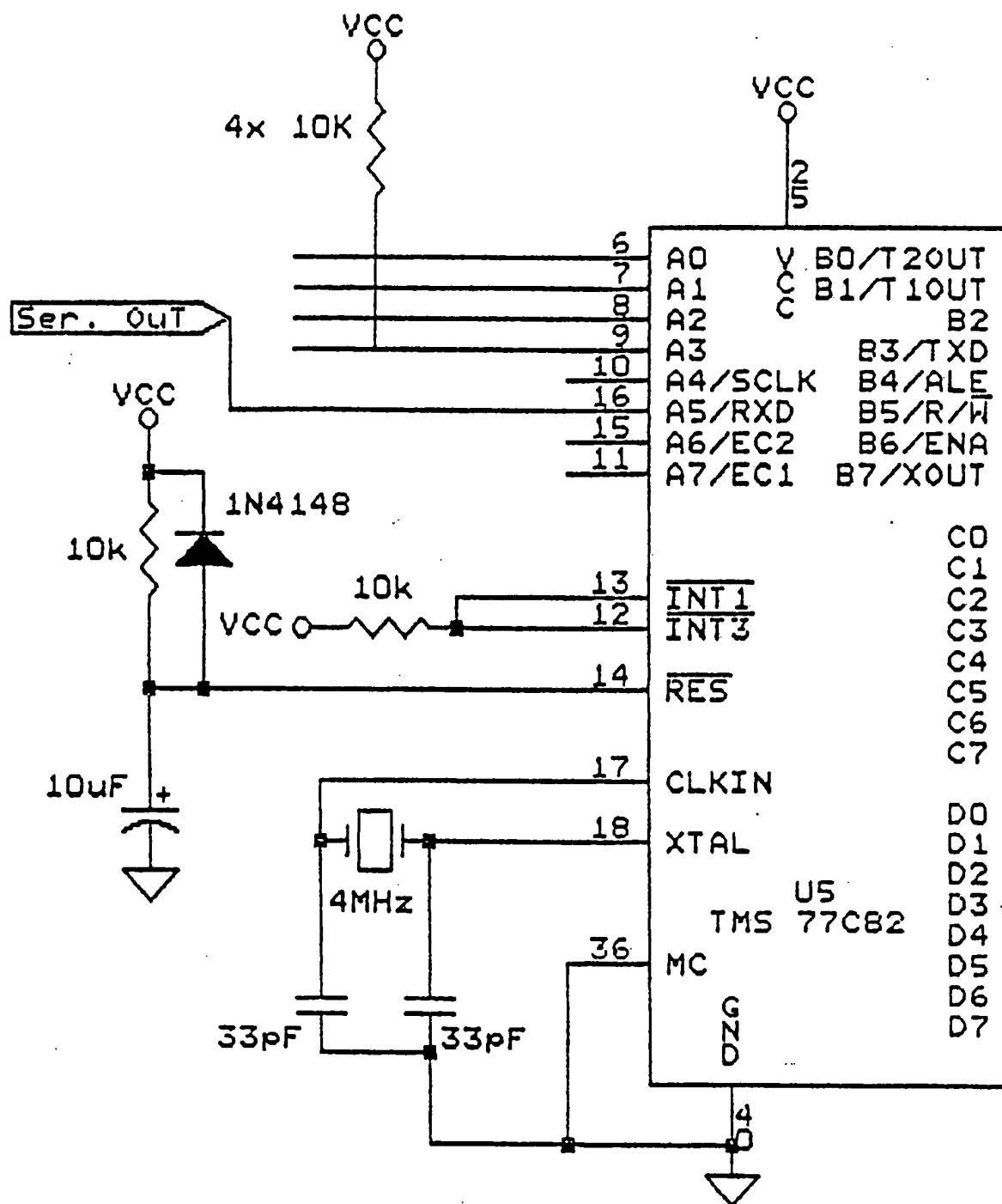


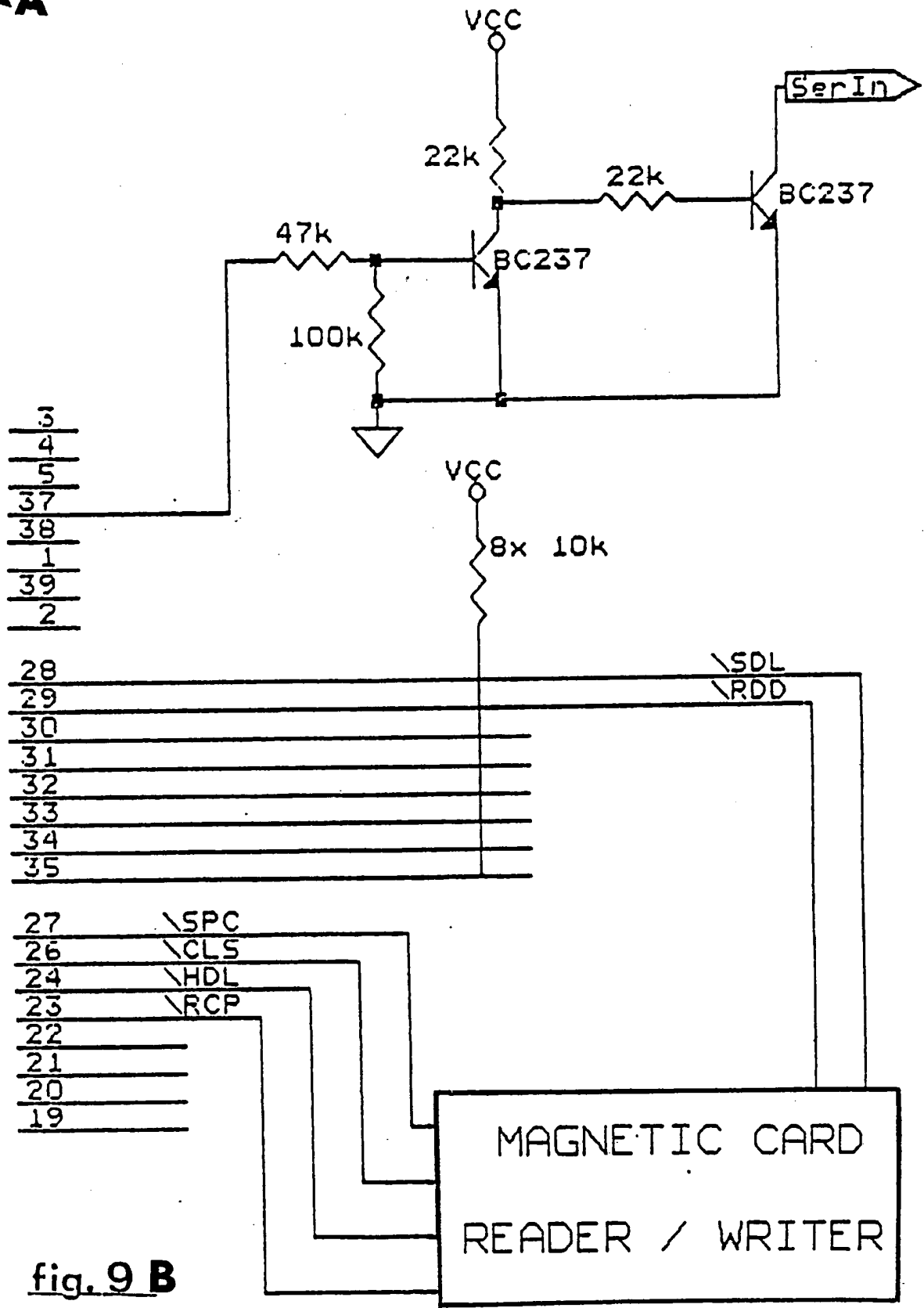
fig.8 D



**fig. 9A**

**B>**

**A**



**fig. 9 B**

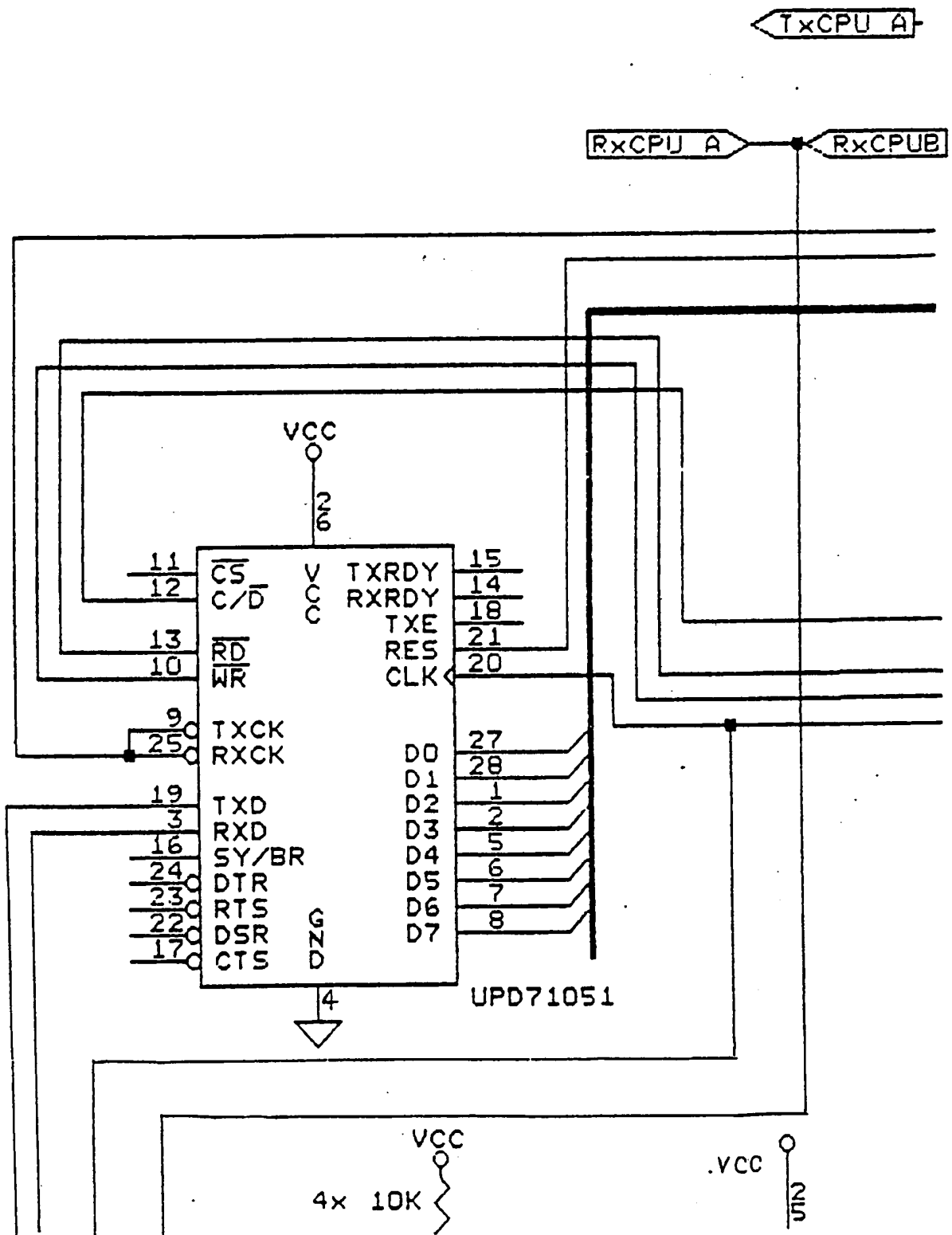


fig. 10 A

B  
C

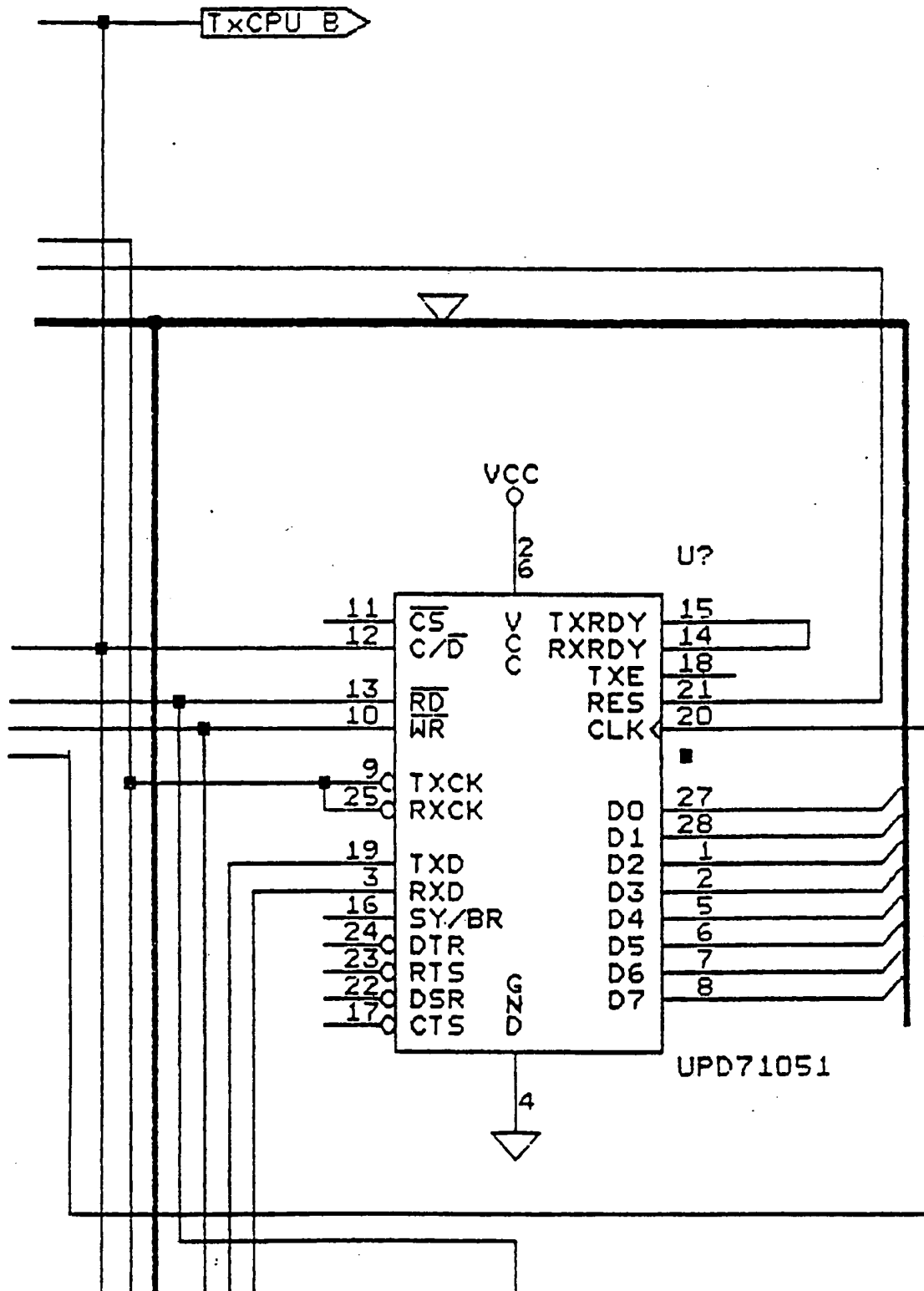
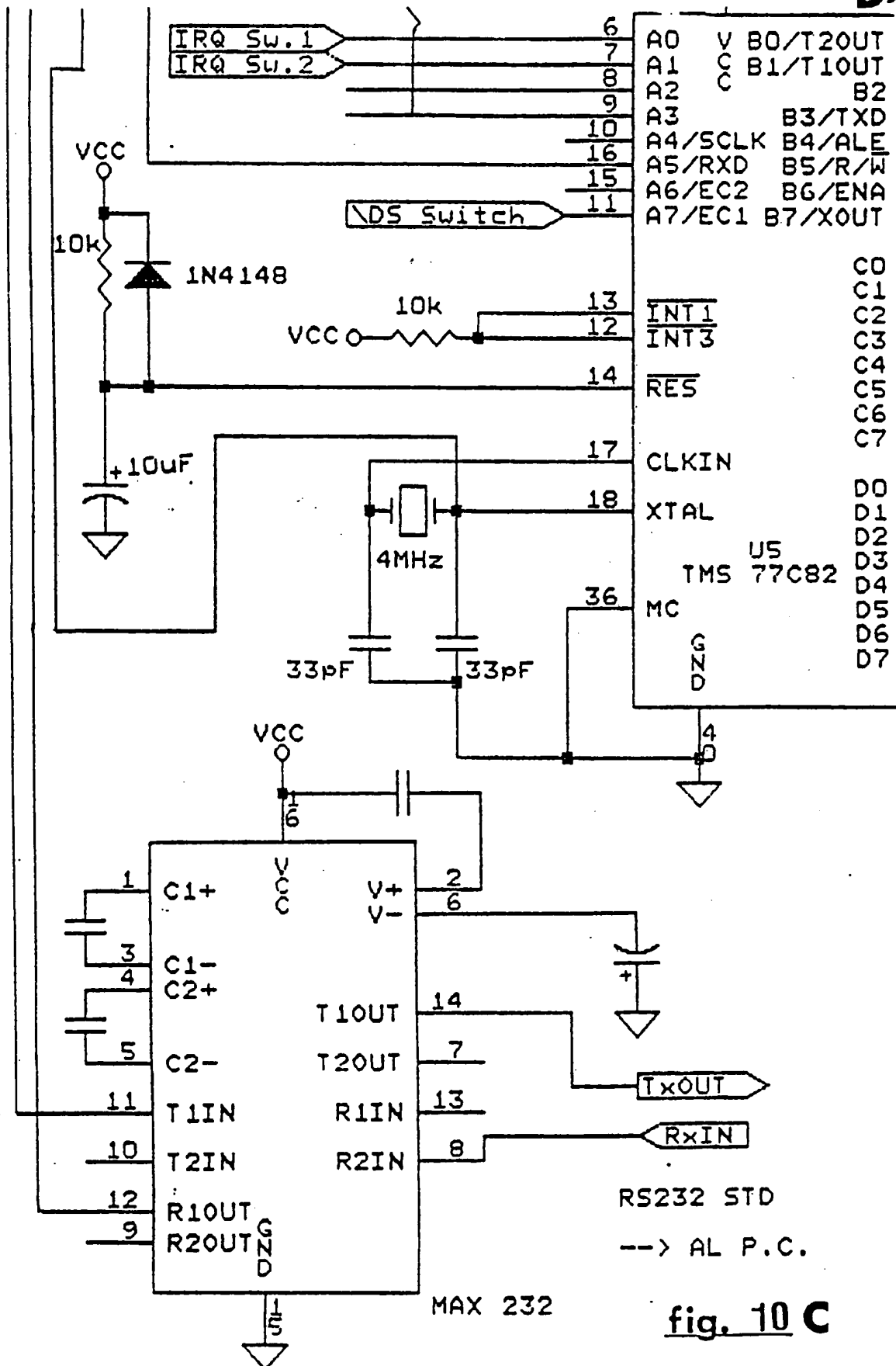


fig. 10 B



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A  
D

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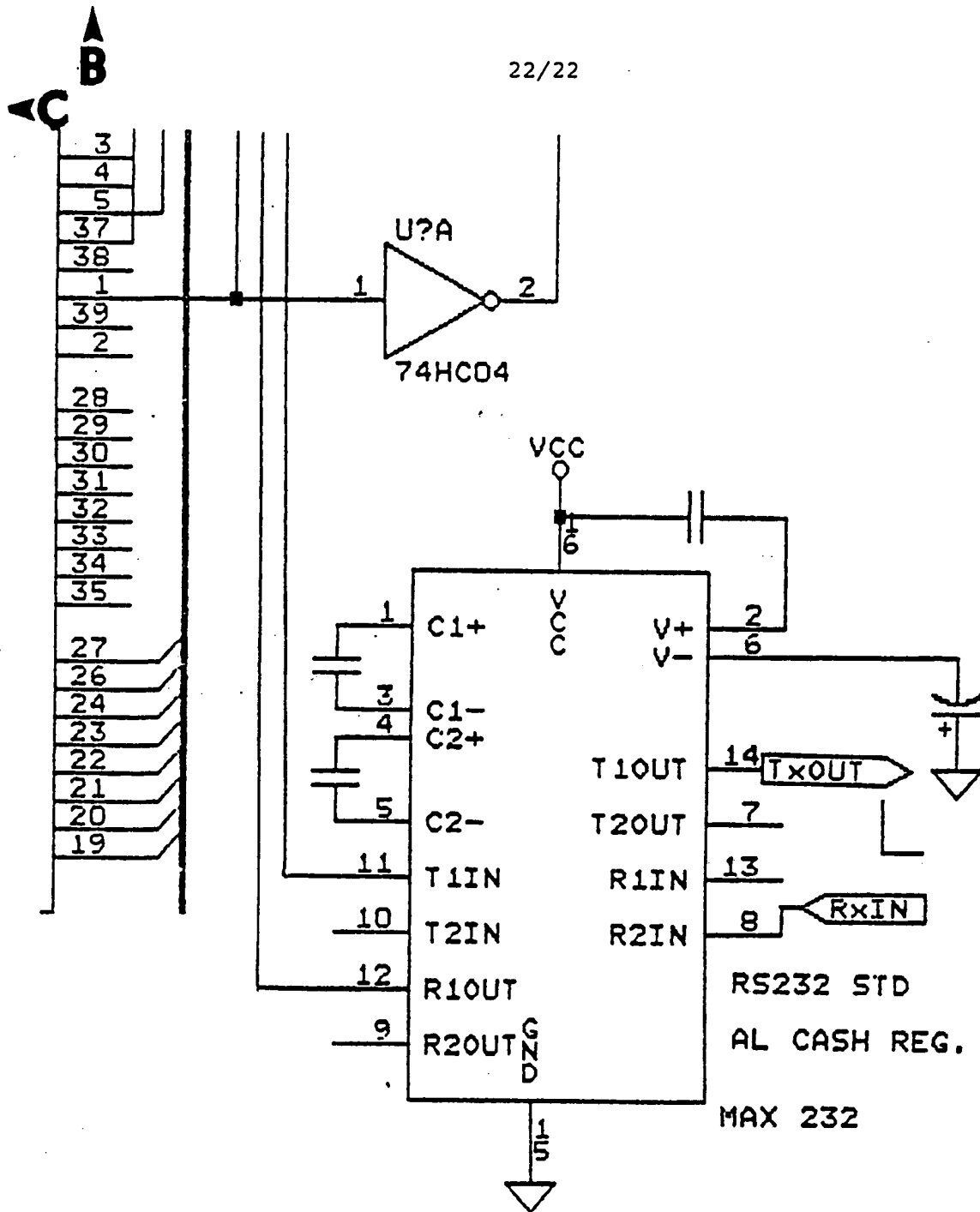
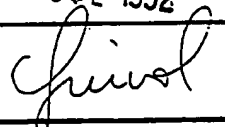


fig. 10 D

## INTERNATIONAL SEARCH REPORT

PCT/IT 91/00103

International Application No

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) <sup>6</sup>		
According to International Patent Classification (IPC) or to both National Classification and IPC		
Int.Cl. 5 G07G1/00; G06F15/30		
<b>II. FIELDS SEARCHED</b>		
Minimum Documentation Searched <sup>7</sup>		
Classification System	Classification Symbols	
Int.Cl. 5	G07G ; G06F ; G07F	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched <sup>8</sup>		
<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT<sup>9</sup></b>		
Category <sup>10</sup>	Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup>	Relevant to Claim No. <sup>13</sup>
X	US,A,4 750 119 (COHEN ET.AL.) 7 June 1988 see column 4, line 17 - column 5, line 2 see column 7, line 20 - line 48 ---	1-6
A	EP,A,0 189 691 (SOCIETE GENERALE DES COOPERATIVES DE CONSOMMATION) 6 August 1986 see claims; figures ---	1-6
A	EP,A,0 253 240 (OMRON TATEISI ELECTRONICS) 20 January 1988 see abstract ---	1-6
A	FR,A,2 496 932 (MAURY) 25 June 1982 see the whole document ---	1
A	EP,A,0 425 347 (SOCIETE AUDEBERT DELAHAYE VENTURE) 2 May 1991 see column 15, line 9 - line 40 ---	1-6
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III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category °	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	US,A,4 839 804 (ROBERTS ET.AL.) 13 June 1989 see abstract; claims; figures ---	1-4
A	EP,A,0 308 224 (MERIDIAN ENTERPRISES) 22 March 1989 see abstract; claims ---	1

**ANNEX TO THE INTERNATIONAL SEARCH REPORT**  
**ON INTERNATIONAL PATENT APPLICATION NO. IT 9100103**  
**SA 54672**

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on  
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		JP-A- 63014297	21-01-88
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